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Research Note

NORTHERN ROCKY MOUNTAIN
FOREST AND RANGE EXPERIMENT STATION

Missoula, Montana

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NATURAL REGENERATION OF LODGEPOLE PINE ON SEEDBEDS CREATED BY CLEAR CUTTING AND SLASH DISPOSAL

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One of the principal purposes of a study of slash disposal methods in clear cuttings on the Lewis and Clark National Forest, Montana, was to determine the effect of logging and slash disposal on natural regeneration of lodgepole pine. The tests, which were started in 1949, included (1) spot burning of slash concentrations, (2) dozer piling and burning, (3) lopping and scattering, and (4) as a check, no disposal. Seedlings were counted at the end of the first growing season (September 1950) on the various kinds of seedbeds that resulted from clear cutting and slash disposal.

Seedbed	Stocked milacre quadrats (percent)	Seedlings per acre (number)
Natural forest floor	78	9,785
Skidroads	95	8,984
Scarified by dozer piling	83	11,108
Lopped and scattered slash	83	9,716
Concentrated slash	38	1,534
Burned, piled slash	15	551
Burned, natural slash concentrations	24	1,128

On lodgepole pine clear cuttings, seed for regenerating new stands comes chiefly from cones attached to the slash and scattered over the ground. As the above tabulation indicates, seedlings were found in abundance at the end of the first growing season on all seedbeds except concentrated slash and burned-over ground. In places where seeds were not buried by heavy slash or destroyed by slash burning, sufficient seed was available to restock the land. Later examinations will determine how well the seedlings survive and grow.

Percent distribution of seedbeds by slash disposal methods

	Spot burning	Dozer pile	Lop-scatter	Check
Natural forest floor	47	47		65
Skidroads	9	6		9
Scarified	--	27		
Lop and scatter	--		100	
Concentrated slash	--			26
Burned, piled	--	20		
Burned, concentrations	44			
Total	100	100	100	100